## CLAIMS

- 1. A polysulfone type selectively permeable hollow fiber membrane comprising a polysulfone type resin and a
- 5 hydrophilic polymer as main components, characterized in that
  - (A) the content of the hydrophilic polymer in the uppermost layer of a surface of the polysulfone type hollow fiber membrane on the blood-contacting side is at least 1.1 times
- larger than the content of the hydrophilic polymer in the proximate layer of said surface on the blood-contacting side, and
  - (B) the content of the hydrophilic polymer in the uppermost layer of the other surface of the polysulfone type hollow
- 15 fiber membrane, i.e., the reverse side of the surface on the blood-contacting side, is at least 1.1 times larger than the content of the hydrophilic polymer in the uppermost layer of said surface on the blood-contacting side.

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- 2. The hollow fiber membrane of claim 1, wherein said uppermost layer of the surface of the polysulfone type hollow fiber membrane on the blood-contacting side is a layer between the blood-contacting surface and a position
- present at a depth of 10 nm from the blood-contacting surface, and wherein said proximate layer is a layer between the blood-contacting surface and a position present at a depth of 1,000 to 1,500 nm (1 to 1.5  $\mu$ m) from the blood-contacting surface.

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3. The hollow fiber membrane of claim 1 or 2, wherein the

content of the hydrophilic polymer in the polysulfone type hollow fiber membrane is 20 to 40 mass % at the uppermost layer of the surface of the membrane on the blood-contacting side, 5 to 20 mass % at the proximate layer thereof, and 25 to 50 mass % at the uppermost layer of the other surface of the membrane, i.e., the reverse side of the surface on the blood-contacting side.

- The hollow fiber membrane of any of claims 1 to 3,
   comprising 99 to 80 mass % of the polysulfone type resin and 1 to 20 mass % of the hydrophilic polymer as the main components.
- 5. The hollow fiber membrane of any of claims 1 to 4,

  wherein the hydrophilic polymer is polyvinyl pyrrolidone.
  - 6. The hollow fiber membrane of any of claims 1 to 5, wherein the amount of the hydrophilic polymer eluted from the hollow fiber membrane is 10 ppm or less.

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- 7. The hollow fiber membrane of any of claims 1 to 6, wherein the rate of pore area of the outer surface of the hollow fiber membrane is 8% to less than 25%.
- 8. The hollow fiber membrane of any of claims 1 to 7, wherein the hydrophilic polymer is crosslinked so as to be insoluble in water.
- 9. The hollow fiber membrane of any of claims 1 to 8, for 30 use in a blood purifier.